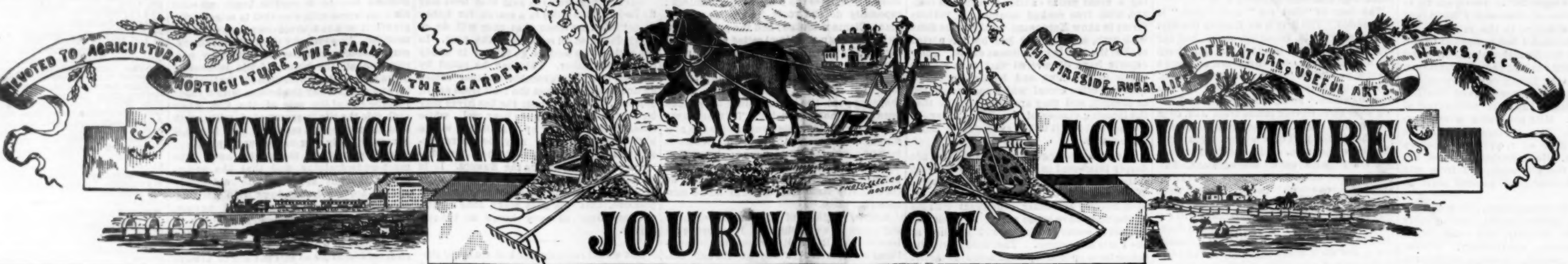


# MASSACHUSETTS PLOUGHMAN



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## AGRICULTURAL.

### Rotations with Potatoes.

Wherever potatoes are grown they are generally to much more profitable than any other crop grown on the farm that there is very strong temptation to have this crop come as often as possible in the rotation. The potato crop frequently sells for more than the land is worth on which it is grown, and we have known it to net the grower a hundred dollars an acre after paying the cost of planting, harvesting and marketing the crop. The year after such a success as this the planting of potatoes is sure to be greatly increased in the neighborhood where it occurs. Even the veteran potato growers are stimulated by such successes not to rest the next year into an increased planting of potatoes, but to arrange rotations as to bring the potato crop more frequently into them. It is well known that potatoes succeed best on a clover sod. So, too, does corn. It is a significant fact that wherever, in any community, potato growing increases largely, it is always accompanied by a decreased planting of corn. The result is that there is less stock kept for stock in winter. It is thus that excessive growing of potatoes tends to make the soil poorer.

Many potato growers try to avoid the bad effects of too frequently planting land with their favorite crop by seeding with clover at every chance they get. We once knew a farmer who believed it possible to plant potatoes every third year by following the clover crop with grain and seedling with clover. This was not the same season after growing three-quarters of a ton of the very best clover hay per acre. The following winter a light top dressing of manure was put on the land, and the clover was then allowed to grow very nearly to bloom before being plowed. By this method of growing potatoes it was said to have the crop planted before the first of June. By this late planting the potato made an unusually strong growth, and at a season when there is little trouble from the potato beetle, as these usually find their homes for the season on pieces of potatoes that have been earliest planted.

But this combination of manure with young clover made the soil extremely liable to potato rot, the germs of which can probably live on clover roots for at least a year if clover immediately succeeds the potato crop. By fall plowing the potato ground and sowing clover or barley the following spring without seeding with clover the latter seeding is postponed to the crop of winter rye or wheat which succeeds the spring grain. But two grain crops required the potato rot. But if the clover is to be planted in the available nitrogen during the two months between July and September, though at this period the clover growth above ground is not nearly so large as it is in the crop out for hay in June.

The top dressing for clover should always be applied the winter before the clover seed is sown. This will greatly increase the first year's clover growth. But if the clover is to be plowed for potatoes no potato stalks should be brought to the barnyard nor should potato peelings or partly rotten potatoes be fed to stock so that the spores of potato fungus will get into the manure pile. Where a great many potatoes are grown there will always be some proportion that is unmarketable, and the temptation is to dispose of these by feeding to stock in winter. This should never be done unless care is taken that no manure made from potatoes goes to the potato field. While we do not believe that potato germs will go through a cow's stomach, pieces of the potato or its outside may become soiled and

thus get into the manure pile, which as it rots will furnish the conditions for their rapid increase.

When we grow potatoes largely, we never calculated to have potatoes come often on the same field than once in seven or eight years. We had a four year rotation from grass to hood crops, either corn or potatoes, then clover or barley the next spring, and this followed by winter wheat seeded with clover, and that allowed to grow two years before plowing for either corn or potatoes again. As we aimed to grow as many acres of corn as of potatoes by alternating these crops, we need not have had clover with potatoes more often than once in eight years. We used the stable manure mainly for corn, relying on potato stalks with a small amount of nitrate of soda mixed with it to make the potato crop. Thus manured the potatoes are much less liable to blight and rot, keeping their foliage healthy until the tubers had fully matured which we were never able to do when stable manure had been applied to potato around the same year with planting the crop.

### Commercial Fruit Growing.

The address of S. D. Willard, the well-known nurseryman and fruit grower of Geneva, N. Y., given before the recent meeting of our Massachusetts Board of Agriculture at Amherst, contains so much of interest that we would like to publish it in full, but lack of space limits us to a few extracts from it, and a hope that every farmer will read it in our secretary's annual report.

After saying a good word for the work being accomplished by agricultural colleges, experiment stations and farmers' institutes, he referred to the beginning of fruit growing in western New York, and said: "Good orchards of all fruits have a fixed value that has been well maintained. They are rarely found for sale, their estimated value being at from \$200 to \$1000 per acre, the difference growing out of the location, condition and varieties grown. The latter has been too little thought of in planting for commercial purposes. A friend who is known as one of the best apple growers in my county has assured me that \$1000 per acre would be no temptation as a purchase price for his orchard, he claims that his plantation of Nonesuch and Baldwin has paid him more than 10 per cent net on the land through the last ten years. The past season, with only a moderate crop, and a large amount of defective fruit, the receipts from about 25 acres have amounted to something over \$4000.

He refers to ordinary farm land in that vicinity which sold 40 years ago for \$185 per acre, and has recently changed hands at \$60 per acre, and gave as a reason for this depreciation "the opening up of the fertile sections of the far West, which, with the rapidly increasing facilities for cheap transportation, and improved appliances for producing and securing everything grown, has afforded competition so sharp that grain growing and stock raising have no longer any attraction for the New York farmer."

"He suggested as a remedy for this depreciation in value, a more diversified system of agriculture and the growing wants of the rapidly increasing population of our cities and manufacturing towns more thoroughly studied and understood, with the view of growing and supplying such products as can be grown cheaper and more profitably than in those remote sections better adapted to other purposes." He therefore stands "as an advocate for more extended work in fruit growing upon such soils and in such locations as experience has shown are adapted to it. Fruit of every name and nature is wanted by some one, and its consumption is rapidly on the increase."

He has found the currant and gooseberry easily handled, well fitted for long shipment, and grown with profit. They seem to thrive best on a cool, moist soil, where the foliage holds well into autumn. The President Wilder and Prince Albert, by reason of their great productiveness and good shipping qualities are his favorites as currants, and the English sorts and Downing pay best among the gooseberries. "The increased demand at home and abroad for the products of canning factories and evaporating houses have then large consumers of all these fruits."

The apple, pear, plum, cherry, peach, apricot and quince are probably grown where intelligent industry and business principles prevail. There is much in the variety, also much in the man. A wise discrimination should be exercised between varieties grown for home use, because of their exquisite quality, and those whose profitable tendency specially fit them for market purposes.

He thought the farmers of New England would be wisely in the planting of large areas of apple orchards at a time when in the fruit-growing regions of Michigan, Ohio and New York, this industry has been so greatly neglected. The danger of over production is quite remote, and as the various insect pests are increasing their work of devastation without effort on the part of the thoughtful, the opportunities for intelligent ambition are constantly widening.

as well as the city markets, while it is Windsor supplies the fruit stands with the largest and most excellent fruit of the season, with no probability of a surplus for years to come. It is rarely sold at less than 10 cents a pound at wholesale." Two parties of Mr. Willard's acquaintance annually sell between 40 and 80 tons of sour cherries, which are packed for market at an expense of about \$1 a hundred pounds, and usually sold it from \$100 to \$120 a ton.

Plum growing has become one of the largest of the fruit-growing industries. A large variety of the European sorts are principally grown, and will be for years to come, but the advent of the Japan type has given the business a fresh impulse. The abundance was first introduced, but the Burbank, by reason of its superior shipping qualities, great productiveness

yard, pasture or road as any cow in the herd. We like, for a presentation, to have a ring in the nose of any bull, and chains from that ring to the tip of each horn, but we never found any absolute necessity for ring or chains in one that had been broken to work.

The dairyman should know his cows, and know how much each cow consumes every day, and whether she digests all she gets and could use more and give a larger return for it, or if she is wasting a part of what she gets by giving no more than she would give if she was fed less liberally. A better knowledge of how to vary the ration, and of what should be the result of a change in kind or amount, would help much to give this practical knowledge.

That is, a man needs to know the feeding

the percentages of butter fat not recovered into the cream when (1) 25 per cent of water at 160° F. added to the milk, (2) 25 per cent of water at 60° F. added to the milk, and (3) no water added to the milk, were the differences of treatment in the setting of milk, in deep-setting pails in ice water.

Consul General Stowe at Cape Town, Africa, says that within the last two months from 3000 to 4000 boxes, 56 pounds each, of American butter have been shipped to that city from London. The marks on the boxes were erased and it was sent as Australian butter. A lack of Australian stamps was first noted, and examination showed that the packages were more solid and substantial than Australian packages. Several thousand pounds of American butter was also received there direct from this

rich quality, it improves a dairyman's dairy decision to patronize them. Cows should not be milked closer than six weeks of calving time, as the milk tends to become unwholesome in quality, and the embryonic calf is robbed of needed nutrition.

GEORGE E. NEWELL.

### For Spring Chickens.

Our modern methods of living are changing our farming in many particulars. The demand is now for early spring lamb and chickens in February and March. Fine, tender broilers at this season are naturally high priced, and it is this which induces poultry raisers to prepare the fests for those who can afford to pay for it. Early spring chickens have to be raised in the winter season, and to do this requires a certain expert knowledge that is the price of success.

Spring chickens at 50 cents a pound are profitable, and even at much less than this one can find money in the business. Besides, it gives the poultry grower work to do at what is generally considered a lazy season of the year. In fact, there is more money today in raising spring chickens and winter eggs than in any other branch of this business. Those who stick to the beaten tracks are the ones who never make a great deal out of their enterprise. But every one will not succeed in raising spring chickens, and it is well that this is so, for otherwise the business would soon be overdone. It takes shrewd business tact, exact knowledge, and careful application of that knowledge, to make the work profitable.

In the first place one must have a warm house suitable for the chickens. It does not take a large one to accommodate 100 chickens, but it must be warm, well ventilated and even in temperature. This is the first requisite. The house should be located so that it will receive the sun through the slats most of the day. The slats must be selected for their success in hatching eggs, and those that show an inclination to neglect the eggs should be discarded. The slats must be fed separately when off the nest so they will not be bothered and worried by the other.

The sitting house should be darker than the main room, and the nests should be arranged in rows. Each hen will learn to know her own nest. Water as well as food must be provided the hens daily. When the chicks are hatched they must be kept together in small colonies free from cold winds and storms. They must be kept growing all the time, and good food, water, and clean surroundings will accomplish this. Warm mash, bread, oat meal and scraps from the table should be their chief daily diet. New hatchings should be made all of the time, so that younger chicks will take the place of those sent to market. The market for spring chickens is best at Christmas time, but the demand continues right along until May. It is astonishing how many can be raised in a small house by hatching out new broods every two weeks, and by spring one will find more profit than can be made from the old chickens all through the year.

JAMES S. SMITH.

Maryland.

### Home-Cured Pork.

It ought to be considered disgraceful for so many farmers to get entirely out of meat the latter part of summer. If they do, and are obliged to buy at the groceries they will pay much more than the same pork would cost if put up by themselves, and where the pork has remained in a grocery all summer, and has been handled two or three times a week, it is almost sure to be more or less tainted when the barrel is nearly empty, if it does not show taint before that time. When pork is put up for family use a stone jar of 15 to 20 gallons is better than a wooden one. Put an inch of salt on the bottom of the jar, and pack the side pork on edge as closely as possible. Then fill in all the spaces between the pork with salt. Put a cover over this and weight it down. Last of all make a strong brine, putting in an ounce of saltpetre for every jar, and pour it over the whole quantity sufficient to cover the meat at all times. The effect of the saltpetre is to prevent the meat from getting too hard. Meat that is to be smoked is better to be cured with salt to which one half its weight of sugar has been added, and one ounce of saltpetre mixed through the whole. This may be cured in ten days or two weeks. The sugar greatly improves the flavor of the meat, as salt, sugar and the saltpetre are rubbed into the meat every third day making the change from one brine to another until salt enough. Then smoke the bacon and hams treated in this way and they will be much better than bacon or hams cured in brine.

All pieces with much bone, as the spare ribs, head and extremities, should be used in cold weather, or else kept always under brine, with frequent looking at the surface to see if scum is rising. If it is the brine should be removed and boiled to cause its impurities to rise, and then after these are removed it should be turned on again, placing the meat first in a layer of fresh salt. As most of the butchering is done at the beginning of winter, as good a plan as this is to freeze the meat in barrels and keep them frozen in a clean, dry place where they will always be surrounded by cold fresh air. If there is at any time danger of a thaw place the spare ribs in a refrigerator well supplied with ice.

Where neighbors are neighbors, as farmers ought to be, the interchange of spare ribs, tongues, heart and liver of killed animals often proves a convenience and advantage to both parties. All have more at killing time than can be used without loss, but by exchanging with each other both parties will be able to enjoy meat in better condition than if either relied only on what his own stock could supply.

### Strawberries in New Hampshire.

The cultivation of this fruit is gradually extending in this State. Since apples have paid so poorly, many farmers, where there were any markets, have given much attention to this fruit. They have cultivated it as a field crop, manuring and tending the plants about as they would corn and potatoes. The distance planted has been four feet between rows and 15 or 20 feet between plants. Set in this way there is ample space for using horse power in cultivation. Many of our farmers think that strawberries are a more certain crop than potatoes, and about as cheaply produced. They need more weeding, but not so much spraying with paris green.

Of varieties the Crescent is still much prized, as is the Haverland, although the latter is being discarded, as it is too soft. The Brandywine has given much satisfaction. It may not be so prolific as some varieties, but it is a fine, solid berry, that can be transported long distances. The Clyde is being extensively tested, and thus far it is satisfactory. The Greenville is a good, all-round variety that is planted extensively. The sample, from what we saw of it last season, is worthy of further trial.

Last June the New Hampshire Horticultural Society was invited to the fruit farm of George F. Beede of Tremont, to hold the first annual strawberry field meeting. The day was fine and the gathering large. The strawberry beds were inspected and the fruit tested, and everything was so satisfactory at this first gathering of the kind that it was decided to meet another season at the Experiment Station, Durham, for the second annual strawberry field meeting. That this awakening of an interest in strawberry growing will be beneficial we have no doubt, as it will tend to get farmers out of the rut, and lead to better financial returns.

J. H. HAYES.

Dover, N. H.

### Farming from Experience.

Every farmer learns much each year about his business by the experience he gains. It is the most valuable knowledge, provided the farmer has learned to discriminate as to the true cause of success or failure. It will at least teach twice the capacity of his own soil and location. While farmers read with interest what other farmers have done in other localities, it does not affect them as does decided success or failure in their own neighborhood. What one man in any locality has done others may also do if they have like soil and conditions. Almost all the special crops that are grown in certain neighborhoods are the result of experiments made at first with much doubt, but when proved a success, inducing others to imitate the example. In such cases the pioneer who introduces such crops benefits the entire neighborhood quite as much as himself. He is not injured by the competition of his neighbors, for whatever the farmer grows there is sure to be a large market for it that the production of a large amount calls for from a distance, so that the farmer can sell at his own doors instead of marketing his special crop at a distance. An individual success, no matter how extended a scale, cannot create such a home market.

### Orchard Wisdom.

If orchards are to be made profitable they must receive as good care as other crops. Good drainage, natural or artificial, is essential to success. Trees are impatient of wet feet.

Good tillage increases the available food supply of the soil and also conserves its moisture. Tillage should be begun just as soon as the ground is dry enough in the spring, and should be repeated as often as once in 10 days throughout the growing season, which extends from spring until July or August.

Only cultivated crops should be allowed in orchards early in the season. Grain and hay should never be grown. Even hedges or cultivated crops may rob the trees of moisture and fertility if they are allowed to stand above the tree roots. Cultivators are the best crop to raise in an orchard.

Watch a sod orchard. It will begin to fail before you know it. Probably nine-tenths of the apple orchards are in sod, and many of them are meadows. Of course they are failing.

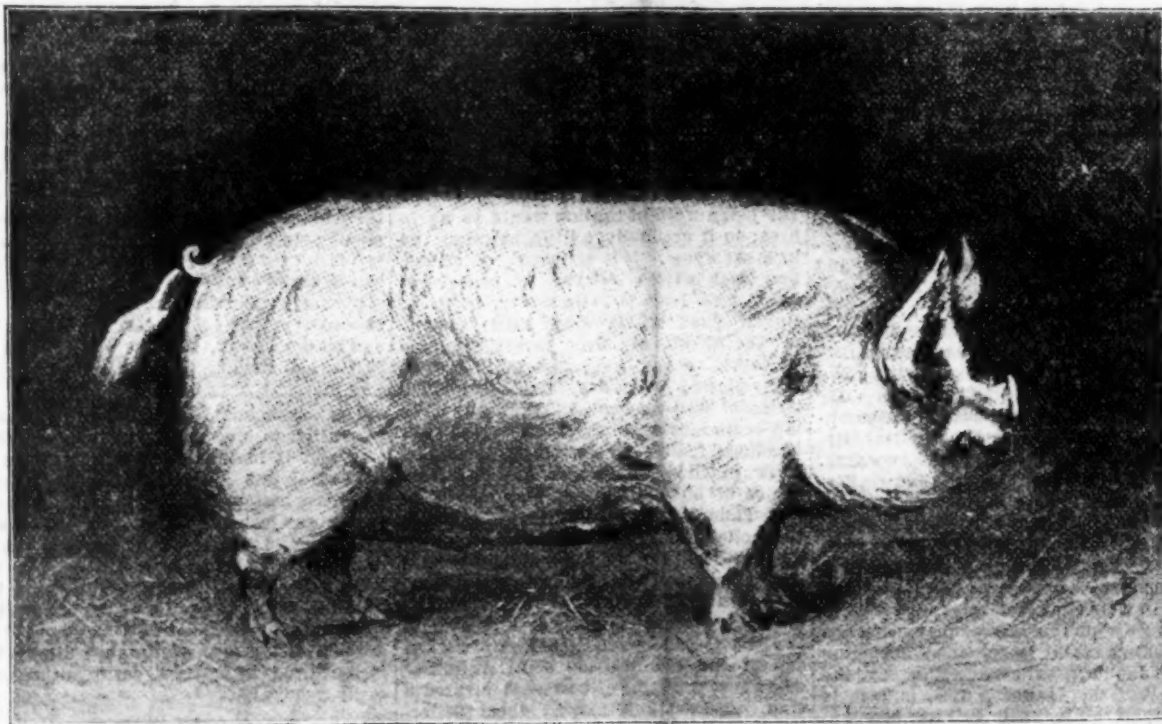
The remedy for these apple failures is to cut down many of the orchards. For the remainder the treatment is cultivation, fertilization, spraying—the trinity of orthodox apple growing.

Potash is the chief fertilizer to be applied to fruit trees, particularly after they come into bearing. Potash may be had in wood ashes and muriate of potash. It is most commonly used in the latter form. An annual application of potash should be made on bearing orchards, 500 pounds to the acre.

Phosphoric acid is the second important fertilizer to be applied artificially to orchards. Of the plain superphosphates from 300 to 500 pounds may be applied to the acre.

Nitrogen can be obtained cheapest by means of thorough tillage (to promote nitrification) and nitrogenous green manures. Barn manures are generally more economically used when applied to farm crops than when applied to orchards, yet they can be used with good results, particularly when rejuvenating the old orchards.

Cultivation may be stopped late in the season, and a crop can then be sown upon the land. The crop may serve as a cover or protection to the soil, and as a green manure—Professor Bailey of Cornell Station.



CHAMPION MIDDLE WHITE BOAR. PRIZE WINNER AT ENGLISH SHOWS.

and value as a canning fruit, heads the list as a favorite orchard sort. The Red June has shown itself to be wonderfully hardy in fruit bud, very early in ripening, and of so good quality and attractive color as to command the markets on which it is placed. The Wickson, October Purple and Hale complete the list. The Wickson makes a good growth, and blooms freely, but thus far has failed to set much fruit. It may lose this fault as the trees grow older. The Hale excels all others in quality for his taste, and the October Purple with its requirements and great demand for a late plant, it may be picked green, and in 10 days will be found to color and mature perfectly for market.

The quince is grown to perfection on lands where the apple and pear are found to thrive. Its fitness for long-distance shipments makes it a favorite fruit with many growers, and some of them claim that it can be produced at less cost than the apple. With a better knowledge of the wants of the peach and apricot as regards soil and location, and the development of varieties whose fruit buds are specially fitted to withstand the extremes of our climate, the cultivation of these fruits are considerably on the increase.

Farmers who are satisfied with results of a system in which commercial fruit growing has no place, were advised to continue the same with all the intensity of purpose they possess, but those who desire to add this to their interests may find in it inducements worthy of consideration.

### Dairy Notes.

Why not take time this winter to teach the young bulls to work in a crooked yoke. If taken before they are a year old, they are as easily trained as a steer, and they can be made to do much work, often enough to repay their keeping without regard to what they may do as breeders. They can draw, plow, harrow or cultivate next spring as well as a horse, and can be easily learned to step as quickly as is needed. They can also work in treadmill or horse power and make themselves very useful.

The exercise will do them good, and they will be surer getters of calves than they would be if standing idle in the stall or yard, and such daily work makes them quiet and tractable. This not only lessens the danger from handling them, but it helps very often to induce the owner to keep them longer, to a greater age. They are not at their best for breeding purposes until three years old, and more than one-half the bulls in the country are put to service too young, and killed before they have reached their best point, partly to save expense in keeping them when not needed in the herd, and partly to rid of them before it is dangerous to handle them.

Even with thoroughbred stock that costs a high price this is often done. We have seen bulls go to the slaughter house before any of their get had been tested, that were almost invaluable because of their power to reproduce the milk or butter-producing qualities of their breed, and large sums paid to replace them with those which were not worth their yard room in the herd.

If the old bull had been earning his living in the sled during the winter, he might have been kept many years longer. We have seen an eight-year-old Jersey bull, that had been trained to work, that was as quiet and pleasant to handle in barn or

value of the forage and the grain he uses, which knowledge he can obtain theoretically from the agricultural papers and bulletins from experiment stations, and then he needs that knowledge gained only by practical experience which will show him not only the amounts consumed and produced by each animal, but the effects upon the condition of the animal.

To weigh and measure and put upon record food and products of each animal is some trouble, but it is almost as important to the farmer as it is to the trader to weigh and measure and keep a close account of what he buys and sells. We would think it a queer method if the storekeeper agreed to give the farmer what he wanted from the store for what he had to spare from his farm products, be it much or little. He might make money in some cases and would probably lose in others, and that is what the farmer does with his cows.

Try to keep an account that will tell which ones are paying a profit, and strike the others off the books as worthless customers, unless a little more knowledge of feeding rules, a little more warmth in the stables and a little better care generally can stimulate them to better production.

Professor Robertson, the Canadian commissioner of agriculture and dairying, in his annual report makes the following statements in regard to the setting of milk. As they are all founded upon practical experience in careful dairy work, they should be noted in every dairy room.

1. All milk should be carefully strained immediately after the milking is completed.

2. When shallow pans are used, they should be placed in a room with a pure atmosphere, at a temperature as even as possible at between 50° and 60° F.

3. When deep-setting pails are used, the water in the creamer or tank should be kept below 45° F. or as near 45° F. as is practicable. It is advantageous to have a supply of ice for use in the water.

4. When an abundant supply of cold water from a flowing spring is not available, the cooling power of fresh cold water may be applied economically by conveying it in a pipe to the bottom of the tank or creamer, and allowing the warmed water to run off from the top. If the water be scarce, the overflow may be carried into a watering trough for the live stock on the farm.

5. It is advantageous to set the milk as soon as practicable after it is drawn from the cows.

In a test with deep-setting pails, it was found that the quantity of butter fat not recovered in the cream, and consequently left in the skim milk, was 11.48 per cent. greater when the setting of the milk in ice water was delayed one hour, than when it was set immediately after it was drawn.

6. There was not much difference in the percentage of butter fat recovered into the cream, due to the temperature at which the milk was set, when between 88° and 95° F. The loss of butter fat unrecovered from the skim milk was 2.53 per cent. greater when set at 78° than when set at 95° F.

7. The milk should be left undisturbed for about 32 hours. The quantity of butter fat not recovered into the cream was eight per cent. greater when the milk was set for only 11 hours than when it was set for 22 hours, in deep-setting pails in ice water.

8. With ordinary milk, there is no gain from adding water "to thin it" when it is set. There was practically no difference in

country, and it seems to have given good satisfaction, though some complain that it is too yellow.

There is an opportunity for American exporters to increase their butter shipments to South Africa, if they will give attention to the matter. The demand is greatest from July to October, as Australian butter is on their market from October to May, and Danish butter mostly in May and June. The square box of 56 pounds is most popular there, and is the most convenient for shipment.

### Disposition of Winter Milk.

The period has now arrived when cheese factories and creameries in the Northern States have closed operations for the season, and surplus milk on dairy farms in their vicinities must be disposed of elsewhere.

As to what disposition one will make of his milk will depend the question of winter profits. Winter dairying in its true sense means that cows are employed that have become new milk in the fall. However, I wish to write of that large proportion where the cows have been milked all summer, and where it becomes just a matter of good feed and care to keep the milk profitably coming up to within six weeks of calving time.

The battle is only half won, however, in obtaining milk quantity. The milk must be disposed of in a right way in order to turn it into profitable dollars. Dairy men who carry their milk away and dispose of it at a manufactory during the summer months, are usually ill prepared to manufacture it at home with any degree of success in winter.

To such dairymen in central New York I would say, unless you are prepared to make No. 1 butter, i. e., butter that will sell for a first-class price on the market, you had better send your milk to a shipping station as soon as your local factory or creamery closes.

Dairymen who live long distances from a shipping station can usually profitably club together when it comes to milk hauling, one man carrying the combined product of the neighborhood one week and another one the week after, etc. By this plan I have known milk to be profitably delivered to the station from a distance of eight miles. Of course if you are sure you can make good butter, and have the facilities for so doing, go ahead and turn your milk into money that way.

It depends altogether on the judgment you exercise in this matter of manufacturing or selling your winter's milk whether you come out a loser or gainer thereby in the spring. Before deciding this question you should ask yourself, "Have I been able heretofore to produce butter selling readily for a top price in the market?" If not, it is not at all likely that you will be able to work a sudden reformation in this line during the coming winter.

A person who in the past has never made any but second-class butter, cannot change his methods so suddenly as to turn out first-class butter from the start. Experience in this line, as well as in others, costs time and money, and the class of dairymen I am speaking of are not situated so as to spare either.

The milk-shipping companies as a rule pay a fair price for milk in winter, and expect as they do rigid lactical purity and



## Farms for Sale.

## Profit in Sheep.

EDITOR OF THE PLOUGHMAN:

The excellent article in your paper of the 31st inst., reprinted from the Transcript, on "Sheep in Massachusetts," contains interesting history, and much good advice on this important but sadly neglected question. As a sheep keeper for 20 years, active in organizing the husbandry upon our farm, and attentive to the minutest details of the business, I feel compelled to add something to the Transcript's article, and will venture to make some corrections.

N<sup>o</sup> thoughtful farmer will dispute the statement that the maintenance of the fertility of pastures is the most perplexing of our problems. Milk production is exhausting to the soil. The manure saved in the stalls and yards is all required to keep up the morning. Good husbandry does not put out on the aftermath, and from mid-May to mid-October good pasture must be provided.

C<sup>o</sup> seek the best grasses. They will not consume the coarse growth, consequently coarse weeds multiply, and alder, birch, laurel, blueberry, chokeberry, willow, thornbush, sumach, elder, witchhazel, hawthorn, a porcupine catalogue, usurp the ground, asserting themselves against the sheep and grubbing away, until the tired husbandman fully believes in the curse of Adam's sin.

Not only is there this mass of vegetable life but exhausts fertility. So that with the low price paid by city contractors for milk the value of the pasture is lost in the milk can.

We have all seen such pastures laboriously cleared and burned over, but in a year or two, nature, that seems to enjoy the sight of her worthless offspring, had renewed it all in greater vigor than ever.

Side hills or rocky soils thus overgrown are practically lost as cow pasture. It will not pay to clear them into arable land and seed down.

They can be planted at little expense with the seeds of white pine or other useful timber, but our farmers do not work for the next generation. There is a potential remedy, an unfailing specific, which restores the soil and covers the land with sweet grasses. It is found in pasturing the land with sheep.

This alone is a sufficient reason for a return to sheep husbandry. Here a first profit in harmony with divine law; not the result of taxes laid on shivering poverty in selfish and vain attempts to increase the price of wool by human enactment, but a new source of wealth and an addition to the sum of comfort.

At this point comes in the difficulty made by the Transcript's writer about fencing. His remarks are not founded on experience. He says: "Sheep raising involves very close fencing," and asserts that the old walls of New England pastures are of no value as fences and an obstacle to making them. This is a mistake.

Old walls, even half thrown down by careless generations of trespassing vandals and hunters, are the best possible fence. A light post or stone stake is driven, leaning against the wall on the outside, and two lengths of barbed wire, stretched a foot apart, so that sheep climbing upon the wall encounter the wire.

This is the sheep's possible fence and is entirely effective. Sheep do not make a running jump at a barrier unless it is the entire perit. They climb on a wall reaching for herbage, and when they meet wires they turn back. Thrifty, short-legged sheep are not wanderers or jumpers.

The dog question is serious, but not nearly so bad as I once thought it was. I need not repeat the language of the laws respecting damage, but I will say that they are adequate to reimburse the farmer for all loss. If he is a man who can take his own part and insist on his rights under the law.

L<sup>o</sup>ws do not excite themselves. A sufferer from any form of trespass must act in his own behalf. I think the present sheep law in the Commonwealth as good as we can expect. The dog interest far outweighs the sheep influence, and we must look at things as they are. It is not true, as asserted, that the sheep owner is compelled to take a minimum price, or suffer the ruin of his flock sometimes without recompense.

It is my experience that he is liberally dealt with. Twice I had to claim damages; once for 27 sheep killed and badly injured in an enclosure at night, within sight of my windows. Competent appraisers assessed my damage liberally. There were some 50 sheep in the flock, and the damage was held to be general. I think the sheep that were not killed entirely recovered, and were as good as before. One imported ewe was so badly torn that she was called a total loss. She recovered and lived to be a dozen years old, and the dam of as many lambs, whose blood is in the best flocks of this State.

It is false to say that this damage was at the best time of the year for recovery. It was early in June. If it had been two or three months later, or towards winter, when the ewes were heavy with lamb, it would have been much worse.

I found that my money was to be collected from the county commissioners, who had the power of revision, and that I was compelled to wait until the annual accounts were made up at the end of the year. It seemed a great injustice that a farmer, who never has capital to spare, and who has suffered in his property and feelings from the violence of a licensed animal, should have to wait, possibly a year, for money to restore his flock.

With this view I went to the General Court and presented the case, urging the inadequacy of the law to do the farmer justice. The law was changed, and has since been altered into the present form.

The Transcript writer considers the law of 1868 a wiser act for the protection of sheep than the present statute. The ancient law provided that the owner of the dog should pay double damages or kill his dog. In the first instance, and in the case of a known sheep killer, he should both pay and kill the dog. This may have been a wise law (though I doubt it) when the colony inhabited a narrow strip near the sea coast, and every man knew all the neighbors and the dogs, but it would be of no value today.

No dog to worry sheep by daylight in sight of men. It is unsafe to look to discover the murderer, and when found, he is apt to belong to some one unable to pay, and it may be, willing to quarrel. Town dogs will go miles into the country at night, returning before they are missed from home.

It is my opinion that farmers have law enough. Dogs have their ears and friends and their rights. They pay a heavy license fund which is liable for the damage very few of them do, and we must remember a law of no value which is not supported by public sentiment. The last 10 or 12 years that I kept sheep no dogs meddled with them. I lost all thought of dogs. I think the neighborhood dogs become acquainted with sheep and respected them as property. Hence the way to overcome the dog trouble is to keep sheep.

England is white with sheep and all alive

with dogs. I have seen a lack of hounds in full cry after a fox, followed by the whole hunt, go directly through a flock of sheep, scattering, but not alarming them. British dogs know all about sheep and the sheep are not afraid of them. In the Pyrenees sheep are herded with large, savage, black dogs that will maul a wolf.

The fear of "foot rot" and "scab" is groundless. The first is an English disease, and I have seen it in imported sheep, but only if pastured do not produce it. All sheep are liable to scab, but there are antiseptic washes and "dips" that prevent or cure it.

There are only two good reasons for not keeping sheep. First, the trouble of looking after ewes having lambs from Jan. 20 to March 15, at night. A man may be kept at the sheep shed part of a winter night with the mercury at zero. I do not think this is necessary with good management, but it is an alleged reason. A skilful shepherd can do better than that, or the objector can raise late lambs with less profit. The same complaint will get up hours before daylight and drive in darkness or storm to deliver milk in at a distant town, and do it every short day in the year. The second reason is not easy to answer. It is a lack of capital to keep stock from which cash returns only come in the spring, when lambs are sold. Wool is only a by-product of sheep raising on farms.

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JOHN E. RUSSELL.

Leicester, Mass., Dec. 12, 1898.

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The question as to whether we shall allow the sugar and other products of the Philippines to enter this country free of duty to compete with our own farm products is one now absorbing a great deal of attention. Senator Morgan of Alabama, who is the ranking Democratic member of the Senate Committee on foreign relations and has always been in favor of a strong foreign policy for the United States, contends that we can impose a duty on Philippine products, if we desire, or exclude them altogether. Our Government has as much right to hold colonies as France or England, he says, and makes no distinction between control as it may see fit. Unless the Spanish treaty provides to the contrary, Porto Rico and the Philippines will not become territories of the United States, but will simply be outside possessions, not integral parts. Hence, the senator claims we may put any duty against them we may choose. He cites the case of Hawaii. We own it, and yet we continue to collect duties on its products, although because Congress has declared that we should. There is no question of military government, and if we can maintain a tariff against it for a moment we can do it forever.

The friends of the Nicaragua Canal project are active in plans for pushing their scheme, and evidences of their intention have already been seen in the Senate. Senator McMillan submitted a report in the Senate on the subject of the new concession granted by Nicaragua to another company, and gave notice of an amendment to his original bill. The friends of the measure are confident of its passage at this session. The President in his message to Congress spoke of the canal as a necessity, and will, of course, promptly sign it when passed. A preliminary report from the Government commission that has just returned here from Nicaragua, after a careful study of the problem, is being prepared and will be submitted to the Senate. The commission, of which Admiral Walker is chairman, considers the project a feasible one. The consensus of opinion seems to be that the canal must be owned or controlled by the United States.

A report received at the State Department from Vice Consul Bloom, at Copenhagen, after calling attention to the damage done to the American corn crop by the European corn borer, which Danish officers for American Indian corn, states that serious complaints have been made against the American importation of Indian corn for foreign shipment, and that from investigations which he has personally made, he considers the complaints well founded. It seems incredible, he states, that corn coming from Denmark, which is a country of Denmark, Philadelphia and New York, by regular steamers, could be passed by inspectors as Corn No. 2, sale grade, as it was full of dust, dirt and sand, averaging from three to five per cent. To say nothing of this loss of weight he believes it reasonable that this dirt had a bad effect on the sound corn, damaging it before it reached its destination. Once having acquired a reputation, every effort should be made to retain it, especially with a product which has been so difficult of introduction as American corn.

While eyes are turning southward in the direction of tropical islands, it is interesting to note, according to the United States minister to Hayti, that American capital is about to see an entrance into that island to develop its resources. A New Jersey company is being formed to construct a canal across the island, and water supply in various localities. Another company proposes to develop the native woods, which are very hard and unsuitable of a high polish. Another syndicate is being formed to build a railroad which will open up the northern part of the island republic. The native government is aiding these enterprises as far as possible, and desires to induce American capital to invest there and assist in developing unknown resources.

Most extravagant claims have been made both for and against the mid-African limbless cotton or the Jackson limbless cotton, which is one and the same thing. That the limbless cotton is a superior advantage of this cotton are false. Beyond question, but on the other hand the statements made that the variety is absolutely worthless is also misleading. There are three firms in Atlanta selling seed, charging as high as \$300 per bushel, but it is probable that with the publicity which the press has given the matter, their sales have passed rapidly decreased.

Although some of the aggressive German journals are now making a great deal of the United States' position regarding the Dingley tariff on their exports, it is not believed that any such action will result. Some of the German chambers of commerce have been taking formal steps to ascertain the trend of public opinion on the subject, and it has proved overwhelmingly against anything like retaliation. Consul Mason rather looks for a conservative policy in the future. He points also to a

remarkable increase in the consumption of American corn in Germany, the gain being 74 per cent. for one year. The Germans are looking forward with apprehension to the display of the value of corn which is to be made at the Paris Exposition. The Department of Agriculture intends making a great maize exhibit as a special feature, with free cooked samples in various forms to show Europeans what can be done with corn. It is imported, however, but only if pastured do not produce it. All sheep are liable to scab, but there are antiseptic washes and "dips" that prevent or cure it.

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The popular supposition that the wild parsnip is poisonous and sometimes results in the loss by death of whole families, is entirely erroneous. The wild parsnip belongs to the same species as the cultivated variety, and is wholesome eating. The error has grown out of the fact that the parsnip closely resembles the poison water hemlock; especially do the roots look alike. This plant (Cicuta aquatica) and the poison hemlock (Conium maculatum) called also spotted parsnip, is frequently mistaken for parsnips, and persons sometimes getting hold of the roots of the poisonous plants will be poisoned from eating what they suppose the same thing they have been in the habit of using. This accounts for the conflicting statements as to the poison of the roots of the whole plant. While it may be a satisfaction to some to know that wild parsnip is not harmful, it might be just as wise to give them a wide berth, as their deadly associates are apt to be mistaken for them.

A novel method of fighting outworn is suggested by an exchange. It is probably feasible only in small gardens, but it sometimes seems in the garden as though outworn seed must have been distributed broadcast, so thickly do they appear. The method is to take a sharp broomstick or a dibble and walk around through the garden while the ground is very soft in the spring and when the worms are working night, and punch hundreds of deep holes. The worms find them, crawl in, and can't get out.

The interests of those residing there and those who are contemplating going to Hawaii and Porto Rico the Agricultural Department is preparing for publication a work on vanilla culture as practiced in the South Pacific and the Indian Ocean. The annexation of Hawaii and Porto Rico, and doubtless the Philippines, adds a new and important element to the cultivation of this valuable commodity, which furnishes the vanilla beans of commerce. The publication has been prepared under Mr. D. G. Fairchild, who has long advocated the necessity of establishing a plant quarantine on these islands against the importation of fungous diseases. "Vanilla plantations have been ravaged by a fungous disease, and the only way," says Mr. Fairchild, "is to prohibit the introduction of living vanilla plants to our islands except by the Government, after scientific inspection." The plant can be propagated very rapidly.

How shall we get at the wealth in the soil, says an exchange. Why plow it to the surface, to the air and sun and frost, and mix vegetable matter with it and pulverize it thoroughly? That is good advice, but just a word of caution wants to go in. Do it to the soil, not to the plant. It is not a good idea to plow it up, as it is in each year. It is supposed, of course, that such advice relates to poor land; deep, rich land is satisfactory as it is. But if land which has been plowed to the depth of five inches (for as far back as can be remembered is suddenly plowed a foot deep, and six or seven inches of hard clay subsoil thrown up on to the surface, it will be a mighty sight of vegetable matter to work it up probably. I saw in the sand hills of Florida an instance of how land could be properly enriched and deepened. Most of the land in the section referred to was about five inches deep with soil (loamy sand), and below that was a sub of bright yellow sand, appearing to contain no humus. The "crackers" in plowing were careful never to turn up any of this yellow sand; they only worked and produced in the top soil. A farmer who knew the value of good peas planted a crop broadcast and plowed them under, turning up an inch of yellow soil, which was mixed with the surface soil by harrowing. Planting a winter crop, he sowed seed peas in the spring and again turned them under, throwing up another inch of yellow soil. This will be seen, as we need to the soil containing the first crop of peas, with which it was mixed. He had been continuing this process, when I saw his land, for six years, using a little lime, and the soil was now a rich, dark brown, and the crops were deep, and capable of producing immense crops for that section.

Washington, D. C. GUY E. MITCHELL.

There are some who have not kept bees but would like to do so, and others who have kept bees and are in doubt as to the capacity of their neighborhood to furnish pasturage for bees. Let us see what they need and what will help to supply their wants.

The assistant entomologist of the Agricultural Department gives a partial list of plants visited by bees for honey or pollen. Filbert bushes ripen in February and March, and the blossoms of nearly all fruit trees in April and May furnish both pollen and honey, and so do currants and gooseberries. Raspberries and blackberries are later. Grapes and vintages in June.

Loon and tulip trees are fine producers of honey in May, while chestnut, lindens, sorrows and catalpa blossoms have much honey in June. June and July are the only blossoms in April and May, and mammoth alikes and white clover from May until August. Alfalfa, much grown in the West, yields fine honey in June and July, and so does bokhara or sweet clover. Some of the forest crops lately introduced, is a great favorite with bees, and blossoms in June. Rape and buckwheat may be sown at various times during the season, and blossom in about a month after they are sown, remaining in bloom a long time.

Serradella is another new forage crop that is a good honey producer, blossoming in June and July. Mustard may blossom from June to August but the honey from it is not first class. Chloery blossoms in July and August, and asparagus in June and July usually, and both are much visited by bees, and peppermint also is a favorite with them in July and August. If grown for seed are in blossom from June to August, and raspberries, pumpkins, cucumbers and melons furnish honey in July and August.

We have said the list as given is but a partial one. The blossoms of the willow, one of the first visited by the bees in the spring, are not named, nor are the maples, though the bees work busily upon their bloom, nor the variety of locust which is known as the honey locust. The fragrance of its flowers will attract bees a considerable distance. The bean crop probably furnishes more honey than any other green crop usually grown, though not a good nectar farm the bees find honey in nearly every plant, as they do in nearly all the weeds. Golden rod furnishes much honey in August and September. Many of our ornamental shrubs and flowers around the house are attractive to the bees and they find much honey in them.

Any one who is familiar with the trees and plants around his locality may judge whether there are enough around him for pasturage for bees through the season, and in this he may remember that from two to three miles in each direction is not an unusual flight for bees in good weather, and that they are known to go much farther than

that, even as far as eight miles having been reported when the Italian bees were so scarce that there was but one place within that distance from where they were at work where they were kept. They then forage over thousands of acres and can find honey if there is any.

But because we have said that bees may fly two or three miles in a search for honey do not think we mean that they will do so every day or at all seasons of the year. In the spring they seldom go far nor in windy or cloudy weather. This may be noted by the fact that if unfavorable weather comes on and continues when the fruit trees are in blossom, the bees near the beehives may be fertilized and the trees bear well, while those farther away or upon a hilltop, where the winds make them more likely to be blown away, may be barren because the bees failed to visit them and distribute the pollen among the flowers. It is in bright, clear days, when not much wind is blowing, and when the heat is not too oppressive, that the bees make long flights, and are busy as many hours as the sun shines.

One would scarcely think of studying the individual character of bees, as he might of farm animals, but there is often a difference between colonies of the same breed, and sometimes in the spire where all are supposed to be from the same stock, that can scarcely be accounted for excepting by the individual character of the queen, which is the mother of the whole colony. While some are peacelike and not unpleasant to work around, others are always ready to attack any one who approaches the hive too closely, and while some colonies are very busy storing honey and pollen, there will seem to be no working workers clustered on another hive, as idle as the drones.

We should prefer to select our queens from the busy but pleasant-tempered ones, if possible, for we have not faith that it is the cross ones that are the best workers, as one writer suggests. Our experience would indicate to the contrary, but we have not had experience with a large apiary, and may not have sufficient data to form our opinion upon.

Certainly we would take the queen away from a swarm from any colony whose behavior in either respect was unsatisfactory, and replace it with a queen from stock that suited us better.

A writer in the Bee Journal strongly objects to having the bottom boards fastened on the hive, excepting for the purpose of moving and shipping, and then would have the nail's heads projecting so that they could be pulled out before placing them on the stand. He says often in the spring there are many dead bees in a solid rotter, mostly on the bottom board, which it is difficult for the bees to remove, but which can be easily scraped out, and should be, by prying off the bottom board with a chisel, to break the propolis that holds the hive on it, and taking a small, straight stick. This is easier than moving the bees and comb to a new hive.

The bottom board is usually the first part of the hive to give out by warping and rotting, and if loose it is easy to replace with a new one. It is also desirable to take away the bottom board and put in a clean one if any comb is broken or licks down upon it, and doing so may prevent other colonies from being attracted to rob it. With loose bottom boards the hives may be raised in hot weather to give better ventilation, and when it is desired to move the hive a short distance only, the board may be fastened to it by a clamp, easily put on and easily removed.

Almost all beginners in underdraining put the drains, whether stone or tile, too near the surface, the only object of many being apparently to get them low enough so that the plow will not reach them. Little need has something to do with this, for the work

of digging increases rapidly as the ditch is dug deeper. In a three foot deep drain the last six inches has often been harder to get out than all above it. The reason is that the upper soil has more of vegetable matter, and has usually also been often frozen and thawed. Where the clay, or worse still, clay that is mixed with gravel, it means a great increase of labor, modified, however, by the fact that the experienced digger makes the drain very narrow, and at the bottom if tile is used he picks away just wide enough for the tile to fit in, and clears away the bottom with a spade just the size of the sole of the tile. If on each side the tile is surrounded with earth that has never been moved or even from it, it is very unlikely ever to get out of place.

And yet most of those who have done much underdraining find that the underdrains thought at first to be laid deeply enough are now frozen down in our coldest winters. They work as well as ever, for as much depth in cold weather, even if it expands the soil, it does not disturb the channel in which the water runs, for in such cold weather as this the soil is always dry. But it is evident that if the underdrains were deeper water would still find it, and from a wider distance either side. There must, either way, be a fall from the surrounding land to the underdrain, and the water will plainly reach a four-foot-deep drain from a rod farther either side than it is were only a foot deep. Now will the tile need to be larger in the deep drain unless a deep spring is thereby tapped. The deep drain makes the soil so much more porous that it will hold more water without being saturated. Hence the paradox that the drained land is always most moist in a very dry time. This is particularly true of very deep drains. The main reason the surface makes but little difference. They cannot drain far when the land is flooded, and they do not deepen the soil to any considerable extent.

In our experience with underdrainage we soon learned that in our northern climate drains should be put down at least three feet, and where there was no obstructed soil, on hillsides, four feet deep was still better where there were not too many large stones. If there is a well placed drain, some of these large stones run down a foot or more below where we are digging the drain, and under one of them we found a spring, which after it had been tapped, removed from the hill most of the surplus water which had before unfitted it for cultivation of crops. If there is a well placed drain, a sidehill it is always best to dig there until a spring of water is found, even if it is deep enough to make a well. If this is done in a dry time a true drain can be put in, and it is difficult for the bees to remove, but which can be easily scraped out, and should be, by prying off the bottom board with a chisel, to break the propolis that holds the hive on it, and taking a small, straight stick. This is easier than moving the bees and comb to a new hive.

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And yet most of those who have done much underdraining find that the underdrains thought at first to be laid deeply enough are now frozen down in our coldest winters. They work as well as ever, for as much depth in cold weather, even if it expands the soil, it does not disturb the channel in which the water runs, for in such cold weather as this the soil is always dry. But it is evident that if the underdrains were deeper water would still find it, and from a wider distance either side. There must, either way, be a fall from the surrounding land to the underdrain, and the water will plainly reach a four-foot-deep drain from a rod farther either side than it is were only a foot deep. Now will the tile need to be larger in the deep drain unless a deep spring is thereby tapped. The deep drain makes the soil so much more porous that it will hold more water without being saturated. Hence the paradox that the drained land is always most moist in a very dry time. This is particularly true of very deep drains. The main reason the surface makes but little difference. They cannot drain far when the land is flooded, and they do not deepen the soil to any considerable extent.

In our experience with underdrainage we soon learned that in our northern climate drains should be put down at least three feet, and where there was no obstructed soil, on hillsides, four feet deep was still better where there were not too many large stones. If there is a well placed drain, some of these large stones run down a foot or more below where we are digging the drain, and under one of them we found a spring, which after it had been tapped, removed from the hill most of the surplus water which had before unfitted it for cultivation of crops. If there is a well placed drain, a sidehill it is always best to dig there until a spring of water is found, even if it is deep enough to make a well. If this is done in a dry time a true drain can be put in, and it is difficult for the bees to remove, but which can be easily scraped out, and should be, by prying off the bottom board with a chisel, to break the propolis that holds the hive on it, and taking a small, straight stick. This is easier than moving the bees and comb to a new hive.

The bottom board is usually the first part of the hive to give out by warping and rotting, and if loose it is easy to replace with a new one. It is also desirable to take away the bottom board and put in a clean one if any comb is broken or licks down upon it, and doing so may prevent other colonies from being attracted to rob it. With loose bottom boards the hives may be raised in hot weather to give better ventilation, and when it is desired to move the hive a short distance only, the board may be fastened to it by a clamp, easily put on and easily removed.

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## Practical Poultry Points.

A writer of Poultry Notes in an exchange says: "Ten flocks, each consisting of ten hens, are enough for an acre." Perhaps so, but as we know of flocks larger than that which are kept in good health and thrive in condition in yards not more than a rod to the acre, we hope such a statement will not frighten all our friends who must limit themselves to the confines of a small lot in the village from keeping a few hens if they desire to do so, and we notice the above statement because we think it calculated to do injury to the poultry business by magnifying one of the problems that beset a beginner in the business. "How much land do we need, and what will it cost to fence it?"

If we owned "all the land that joins us" we should not care to have more than one-sixteenth of an acre for a flock of 25 fowls, and an equal space on which to rear a hundred good chickens from them every year. This would give us 400 fowls on one acre, in fact of 100, as would be allowed by the above writer, and 1000 chickens on another acre during the summer months. With larger ranges they might require less care in furnishing green food for them, but the green food could be grown upon a third acre and the saving in land and fencing would repay the cost of labor, while the extra amount of eggs and chickens produced for sale upon the three acres would far outbalance the production from 300 hens upon three acres.

If we could have land and buildings just as we wanted them, each building of 10 or 12 feet wide by 24 to 30 feet long should hold two flocks, of 25 fowls each, or 100 chickens each, and should have four yards to each building, that we might use two alternately for each flock, and thus grow some green food in the yard not occupied.

Of course those who have large areas of land which is of little value, or which produces but little, may prefer to take larger yards, even at an extra cost for fencing them, and look for a part of their returns from plum or other fruit trees set in them, but larger yards would mean more travel to take care of several pens of fowls, and this is an important item at any season, and doubly so just now, when one has to shovel paths through snowdrifts six feet deep.

Another point to be considered is the character of the land in the yard. We would prefer to have our yards smaller than to have them include a strip of wet and underdrained land that is liable to be muddy whenever we have a rainy day. We would prefer to have our yards on sand, but not almost any other location for a poultry yard, although we should not expect much green feed to grow upon it, excepting such crops as we could plant and grow upon sandy soil so that there would be no gain in increasing the size of the yards. It will be seen that we believe that we can grow green fodder and take it to the yards much better than we could get it by having the yards so large and the flocks so small that they would find their own forage, and we can buy meat ration better than we can grow insects and worms in the yards, and cheaper, but we do not object to the hens eating the cucumbers, moths and caterpillars that they may find under the fruit trees.

The Farmer's Gazette of Dublin, Ireland, in an article upon eggs for the English market, after pointing out defects which injure the sale of many consignments from Ireland, viz., careless and defective packing of the eggs, and want of uniformity in size and color, says: "What is to prevent Irish egg shippers from following the example set them by the Canadian exporters? The Canadian forward eggs to the English market well and carefully packed, and they are sold before shipping, thus securing a degree of uniformity in size and color, with the result that the Canadian eggs are much sought after on arrival in England. Irish egg shippers would do well to make it a rule that eggs shipped to Great Britain should invariably be packed in dry, clean straw, and damp or defective straw—even if it does lessen the expense of shipping—should never be used for the purpose, as has been the case too frequently heretofore. Poultry keepers, too, should be more careful in assorting the eggs on points of cleanliness, size and color intended for market, so that in future there will be no cause for complaint on that score."

Irish shippers are not the only ones to whom these lessons might apply, nor is the English market the only one that likes eggs uniform in size and color and clean looking. The uniformity can be best secured by having flocks of fowls of one breed, and retaining for home use only eggs as are unusually small or large, or not in true shape. Canadian exporters have a certain standard for size, and will not accept anything below that size, while with many of our dealers "everything goes" that has a shell, from the eggs of the bantam up, and from a pure snow white to a mahogany color. Some who handle large amounts assort them for sale offering them for sale, and find it pays to do so, but others will not take the trouble to do it.

A writer in the Poultry Advocate gives a recipe which is much like a mixture we have often used on fowls, but as we think this an improvement on our old remedy, we give it entire.

"What follows should be in capital letters, and no poultryman should be without this recipe or its mixture. It is not a cure all, but for fowls with a cold, it is one of the best remedies ever published. Take three tablespoonfuls of lard and add to it two tablespoonfuls of kerosene oil and one of glycerine, then drop into the mixture, which should be mixed so warm that the lard is reduced to a liquid, two drops of carbolic acid. Use the above in all forms of cold in fowls, well greasing the top of head and under part of neck at and below the throat. Turn up the head of the fowls and allow some to run up the nostrils; and a little down the throat does good also. Used on a fowl at the first sign of a cold or two such treatments will affect a permanent cure quickly. It is a first-class family or household remedy used the same way exactly, and acts particularly promptly in children."

"This same mixture kills all lice and mites wherever it touches. If old fowls are badly infested with lice, one evening thoroughly grease every fowl at the vent and on the head. Keep them out of the rain and out of the dirt a few days if you value the looks of the plumage. For after a few days on dark-plumaged birds, if this taken care of, no sign of the greasy appearance. Having killed all the lice (there are all or very nearly all deposited on the feathers at these two sections), and many of the lice, take another evening and thoroughly dust every fowl with Perleau insect powder. This same mixture is a perfect cure for scaly feet. Apply it warm two or three times a week for two to three weeks. The result is remarkable, the legs coming out nice, bright and clear."

This is the time of year when the fowls are liable to take cold. Snow may blow into

the henhouse and melt, or it may melt outside and run in, in either case making a wet and muddy place in which the fowls must stand, and from which a damp atmosphere arises; during the day, to be deposited at night as frost on the walls and ceiling, to run down again when it is warm enough. Or there may be a place where a wind blows upon the fowls when on the roost. In either case there will be wheezing, sneezing, fowls, then some eyes and swollen heads, then comes roup.

Cure the colds at once if possible, but when the roup comes kill the fowls as quickly as possible and bury them. Roup can be cured, and we have cured it many times and told others how to do it, and we are sorry for doing so. A hen with the roup will eat more than her value before she lays many eggs, and any bird that has it is worthless for a year afterward for breeding purposes, as, if any of the eggs are fertile, which is doubtful, the chickens will be weak and slow growing and late maturing.

## The Poultry Market.

"It is good weather to keep poultry, and that is all we can do with it now," says one of the dealers. The receipts have been light, which combined with cold weather to make dealers hold firm for full prices, and there is little doing excepting the usual hotel and restaurant trade every day, which is about a much in one way as another, excepting the extra demand for the holidays. Chickens are quiet at 9 to 10 cents for Northern fresh killed and 8 to 10 cents for Western dry picked, fowls 8 to 11 cents for Northern and 8 to 9 cents for Western. Ducks and geese are lower now, even to 10 cents for good to prime. There are higher, with a report that Christmas supply may be too small. Good Northern fresh killed are 15 to 17 cents and Western at 12 to 14 cents. Fancy young and fat birds might bring above quotations. Live poultry eight to nine cents in mixed lots. Pigeons are dull at 75 cents to \$1 a dozen and a quail at \$1.75 to \$2.

Game birds in small demand, but prices well maintained. Ducks are \$4 to \$5 a pair for canvas backs, \$1.50 to \$2 for red heads, \$1 to \$1.25 for mallards, blue duck 60 to 75 cents, teal and wildgeese 40 to 50 cents. Rabbits 10 to 15 cents each. Grouse \$1 to \$1.20 a pair, partridge, r. alive, \$1 to \$1.15, Western 75 to 100 cents, quails \$1.25 to \$1.50 a dozen. Venison quiet with only little call at 10 to 15 cents for whole carcasses, 15 to 18 cents for saddles, and 25 to 30 cents for choice cuts.

## Domestic and Foreign Fruit.

The weather continues too cold for much movement in fruit, but with a light crop, and only small demand, prices remain very steady. Apples are firm at quotations. Nova Scotia Gravensteins \$2.00 to \$3.00, Kings the same, No. 1 Baldwins or No. 2 Grays \$2.50 to \$3.00, No. 3 \$2.00 to \$2.50, Hubbardston \$2.25 to \$2.75, Talmes Sweet \$2.50 to \$3.00, Ponds Sweet \$2.50 to \$3.00. No. 2 cooking fruit \$1.25 to \$1.75. Cranberries in fair demand. Cape Cod, choice dark, \$6 to \$6.50, fair to good \$4.50 to \$5 a barrel; boxes, fair to good, \$1.25 to \$1.75. Country, good to choice, \$5 to \$5.50. Grapes sell only slowly, 10 to 15 cents for pony baskets Concord or Niagara, and 10 to 12 cents for Catawba.

Florida oranges in good supply, with no change in prices. Choice bright per box \$3.75 to \$4, fair to good \$3 to \$3.50, grape fruit \$6 to \$7. California Navela very variable in quality, \$2.25 to \$3 for poor to fair, good to choice \$3.25 to \$4, fancy \$4.25 to \$4.75 in jobbing lots. Seedling, also variable from \$1.75 to \$2.50 for fair to choice, \$2.75 to \$3.25 for fancy. A few Mexicans from \$1.25 to \$2.25. Jamaica oranges steady, but in small supply at \$3.25 to \$3.50 for fair to good, and choice at \$3.75 to \$4 for boxes; barrels, good to choice, \$5.50 to \$6.50. Jamaica grape fruit \$6 to \$7.25 for fair to good, and \$7.50 to \$8.50 for choice to fancy. Lemons dull at \$2.75 to \$3.50 for 300 counts, and \$2.50 to \$3 for 300 counts.

## Vegetables in Boston Market.

The vegetable trade is quiet, as weather is not favorable for transportation and people are waiting for warmer days. Then country markets and consumers will probably want to purchase enough to take them through another cold spell. The supplies on hand are not very large, and prices hold rather above last week's figures on many kinds, if quality is first class. Beets, carrots and parsnips are from 50 to 60 cents a bushel. Flat turnips 35 to 40 cents. Sweet German or Cape Cod white, 90 cents a barrel, and yellow from 75 to 90 cents. Onions are steady at \$1.50 a barrel, less 40 to 50 cents a dozen, safety or leak, and radishes, not very large, at 25 to 35 cents a dozen. Hubbardston squash are dull at \$10 to \$12 a ton, marrow and others 40 to 50 cents a barrel. There is a quiet but firm market for potatoes. Choice Arrostoch Hebrons and Rose 55 to 58 cents a bushel, Green Mountains 60 to 65 cents, New York White Star 45 to 48 cents, with Dakota Red 45 to 50 cents and Green Mountains 50 to 55 cents. Virginia sweet potatoes scarce, nominally \$1 to \$1.50 a barrel and Jersey double heads, also in small supply at \$1.75 to \$2.

## Expert Apple Trade.

The total shipments of apples to European ports for the week ending Dec. 10, 1898, were 33,243 barrels, including 25,768 barrels to Liverpool, 3,782 barrels to London, 497 barrels to Glasgow and 308 barrels to various other ports. The exports included 12,853 barrels from Boston, 8,096 barrels from New York, 4,971 barrels from Portland, 847 barrels from Halifax and 563 barrels from St. John's, N. F. For the same

week last year the apple shipments were 24,381 barrels. The total shipments thus far this season have been 856,954 barrels, against 882,536 barrels the same time last year. The shipments in detail to date have been 172,900 barrels from Boston, 105,239 barrels from New York, 34,149 barrels from Portland, 464,164 barrels from Montreal, 125,590 barrels from Halifax and 11,932 barrels from St. John's, N. F.

Cables from Liverpool give sales of 1700 barrels apples by auction last Monday per steamer Ootman. The market was unfavorable, though Baldwins sold at \$3.24 to \$4.30 per barrel. Under date of Liverpool, Dec. 3, James Adam, Son & Co. report the American apple market as follows: "Maine stock is arriving more freely, and although somewhat faulty in condition, the quality, on the whole, is fairly good; the same may be said about Boston Baldwins, for the better samples of which fair prices are readily obtained."

New York has sent some very good Baldwins, but the quantity is very limited. The few Newtown Pippins from this source have sold very well considering quality, which was not at first-class, and as mentioned in our last, we anticipate high prices for really good stock arriving in time for the holiday demand. Californian boxes have not been so plentiful, and values remain much about the same. Nova Scotia Kings left over, ex Uluda, were readily taken at the figures last quoted."

Quotations: New York Baldwins, \$3.40 to \$5.04; Newtown Pippins, \$4.50 to \$6.60; Boston Baldwins, \$3.12 to \$5.04; Maine Baldwins, \$3.12 to \$5.04; Canadian Baldwins, \$3.84 to \$5.16; Spyra, \$3.84 to \$5.28; Greenings, \$3.48 to \$5.28; Russets, \$3.95 to \$5.04; Snows, \$3.48 to \$5.52; Kings, \$5.04 to \$6.00 per barrel; California Newtowns, \$1.91 to \$2.64 per box; \$1.38 to \$1.60 per all-box.

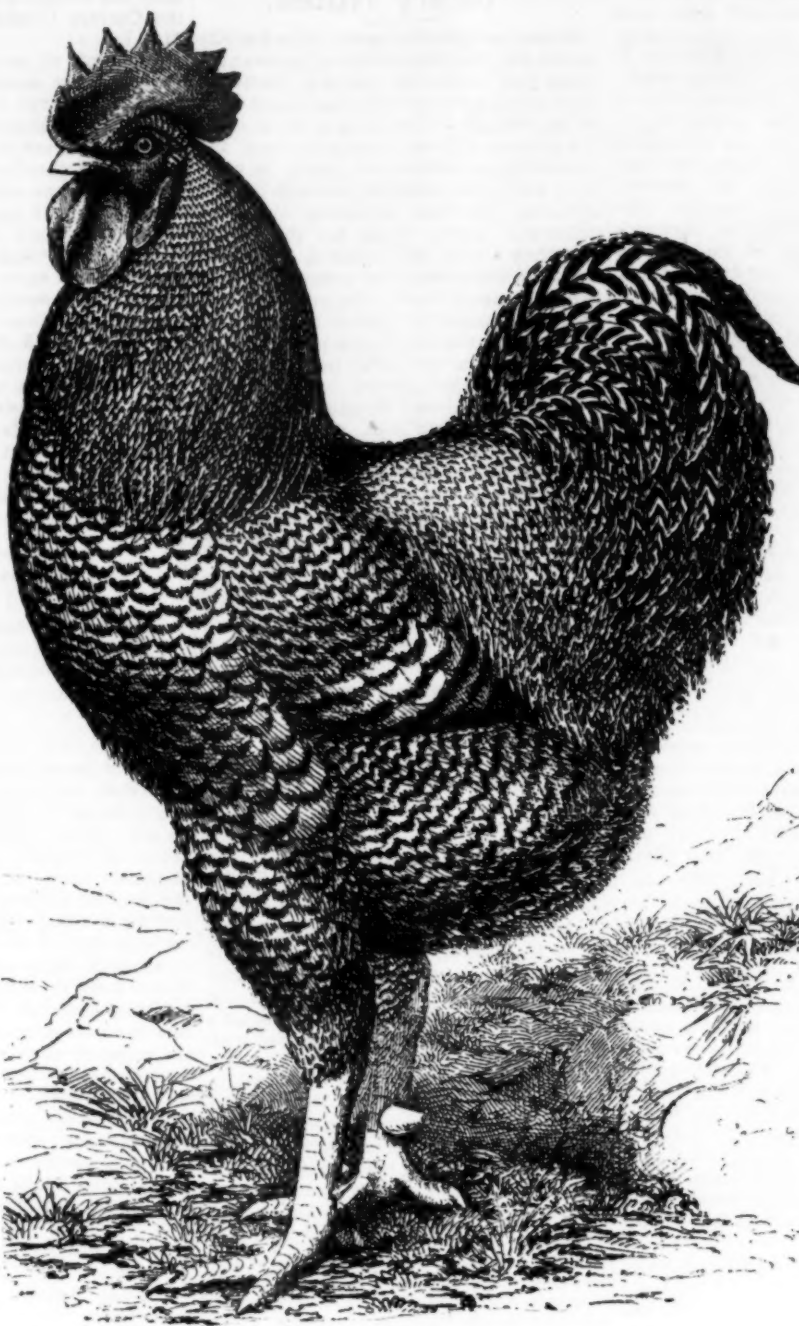
## Boston Exports and Imports.

The value of the exports from Boston for the week ending Dec. 9 was \$2,525,421, and of the imports \$559,891. Excess of exports, \$1,965,530. For corresponding week in 1897, exports were \$1,704,884 and imports \$1,016,546. Excess of exports \$688,338. Since Jan. 1 the exports have been valued at \$115,154,341 and the imports at \$46,547,270. Excess of exports \$68,607,071. For same period in 1897 the exports were \$95,980,557 and the imports were \$22,563,850; excess of exports, \$14,325,592. Of last week's exports, \$2,418,931 worth went to England, \$12,466 to Ireland, \$425 to Scotland, \$24,181 to Nova Scotia and Provincias, \$10,500 to British East Indies, \$30,123 to British possessions in Africa, \$19,022 to Australia, \$756 to Gibraltar and \$992 to Malta, a total of \$3,490,270 to Great Britain and her colonies. Belgium received \$12,022, Netherlands \$6513, Germany \$4,699, Italy \$2,524, Mignon, Lancashire, etc., \$4,456, Turkey in Asia \$650 and Denmark \$251. The principal articles of export were provisions \$793,628, breadstuffs \$460,280, cotton raw, \$648,204, do. manufactured \$20,824, leather, tanned, \$122,553, fruits \$18,812, dr. grs. and chemicals \$10,907, wood and manufactures of same \$13,280, iron and manufactures \$2527, hardware \$15,997, machinery \$38,954, India rubber manufactures \$4600, paper \$6835, spirits \$9067, tallow \$19,238, grease \$2145, oil cake 4193, organs \$3510.

## Boston Fish Market.

The stormy weather and rough waters have made receipts of fresh fish very light, and prices are high as a result. Codfish, market lots, 6 to 8 cents; large to 6 cents, and steak at 8 to 9 cents; haddock, 7 to 7 1/2 cents; salmon, fresh Eastern, at 18 to 20 cents, and frozen Oregon 9 to 10 cents, halibut, 15 to 16 cents, blue fish, 11 to 12 cents, eels 3 1/2 to 4 cents, lake trout, 10 to 11 cents, bull heads 11 to 12 cents, smelts, native, 18 to 20 cents, and eastern 14 to 15 cents. Oysters are scarce at 90 cents a gallon for Norfolk, \$1.15 for Providence river, and \$1.25 for select Stamfords, in shell, 65.50 per barrel, \$1.75 per bushel for ordinary, and \$7.25 per barrel, \$2.50 a bushel for Blue Points. Clams scarce at 60 cents a gallon. Scallops more plenty at \$1.15. Lobsters firm at 10 cents a pound alive and 18 cents boiled.

The shipments of leather from Boston for the last week amounted in value to \$149,974; previous week, \$140,734; similar week last year, \$96,899. The total value of exports in leather from this port since Jan. 1 is \$10,048,454, against \$7,796,477 in 1897.



PRIZE PLYMOUTH ROCK.

## Farm Hints.

The growing of manure crops, or green forage crops to plow in to fertilize the land, is less popular in New England than in many other sections, for two reasons: It costs higher for labor to grow such a crop than in many other sections, and when it is grown it has a greater value for feeding purposes here, and the farmer wants to use it at that way, and put the manure made by the animals upon the land. It may be, also, that it is easier to obtain manure from our cities and large villages here than it is in the less densely populated sections of the West and South.

But there are certain conditions under which such crops can be grown and used here to good advantage. We allude to what are sometimes called "cover crops," such crops as can be put in late in the fall, upon fields in which a crop has been grown and harvested, or is nearly ready to harvest, and which will keep the ground covered during the winter and make a growth in the spring before the time comes when the land must be plowed for another crop.

This crop will utilize and save all the nitrogen in the soil, or which it can gather from the snow or rainfall or from the air. It will also take up and hold, and even change to a more readily available form, the mineral elements that the next crop will need, and thereby greatly assist in its growth. We say assist, for we do not think it advisable for the farmer to depend entirely upon the green crop plowed in to grow a summer crop. We would use about as much manure as fertilizer for the crop as if there had been no green manuring, although we might not feel that it needed to be so rich in nitrogen.

While we like to read and report of cases where a farmer has brought almost barren land up to a considerable fertility by plowing under green crops, we prefer that it should be done without the loss of a year's use of the land, and the expenditure of time and labor that should have been devoted to growing crops for market or for producing food for the live stock of the farm. For these reasons we have been and are now not as urgent to advise farmers to plow under green crops as some other writers.

If a farmer has run-down or worn-out land which he desires to enrich, and cannot easily buy or make manure to put on it, while he has time to plow and sow and re-plow it, he should know the facts and should not need our urging to induce him to put his spare time into its improvement.

But if much of the value of his manure is being wasted away in the water that runs out of his barnyard, or is in the deposit under the stable floors into which the liquids have soaked for years; if the droppings of the cattle are over shoes in the lane or pasture corner where the cattle stand while waiting to come home at night; if the most fertile soil of his fields is in the ridges that have been so many years plowed up against the wall; if he is selling hay or allowing corn fodder to waste and rot in the fields while he could easily keep more stock; if his richest fields need ditching and draining, and to have rocks dug out and carried away, or hedge-rows cut down and burned; if his pastures are being overgrown by bushes, or if he cannot keep weeds out of the crops he grows, he has not spare time to grow crops to plow under, and when he has attended to all these things he may find that his fields are growing so fertile that they do not need manure crops.

But there are other ways of enriching the soil. In many cases a more thorough preparation of the soil before plowing or sowing the seed would increase the crop about as much as could be done by the green crop plowed under, and more frequent stirring of it while the crop is growing would add about as much more, to say nothing of preventing the weeds from robbing it of both fertility and moisture, a point we have already alluded to. Either of these cost only an expenditure of time and labor, while with the green crop there must be an expense for seed.

A more liberal feeding of grain to the animals would yield a return in more rapid growth or larger production from them, and would also add much value to the manure heap if it was kept under cover and not wasted, especially of such grains as when bran and cotton-seed meal, so that more acres might be enriched by the same amount of loads, or the amount now used would make the land stronger, while some time and labor spent in putting the manure from

low pine lumber, most of which is for export. Cuba, having insured plenty of work for a new her, 4000 Southern mills sent far to the new year. The prices at which it was placed, however, do not show a very large margin of profit.

—The statement of the Bureau of Statistics shows the exports of breadstuffs for November, against \$16,497,886, against \$16,748,547 for November, 1897; for coal and lignite, \$2,107,405, against \$2,700,704 for last year; for provisions, \$13,405,919; November, 1897, \$10,996,961; of cotton, \$10,996,961; November, 1897, \$10,996,961; of minerals, \$4,406,250; November, 1897, \$5,594,730. The total of these four articles during November, 1898, was \$66,239,321; for November, 1897, \$53,900,431. For the last 11 months the total was \$696,291,188 against \$604,980,141 for the same period in 1897.

—On the basis of farm prices on Dec. 9, agricultural department figures place the 1898 crops of corn and oats at \$28,000,000 more than the same crops of 1897. Statistics of the acreage this largely to the difference in price. The corn crop is 1-3 larger than 1897, and the average price per bushel is 2-3 cent higher. The oats crop is also a little larger than the 1897 one, and the price was 4-5 cent higher.

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Losses paid during past year, \$36,024.48  
Dividends paid during past year, \$72,493.25  
GAIN IN SURPLUS DURING PAST YEAR, \$30,000.00

DR. T. A. BLAND'S BOOK, How to Get Well, and How to Keep Well. It is the best home DOCTOR BOOK out. Its advice is sound, sensible, safe. Rev. Dr. Bland's book is a charming book, which cannot fail to do vast good. Third edition, revised and improved. Price only \$1.00. For sale by MASS. PLOUGHMAN, 178 DEVONSHIRE ST., BOSTON.

## Dairying for Profit, OR THE POOR MAN'S COW.

For 15 cents. We have made arrangements with the publishers to furnish our subscribers with this little book for only 15 cents. The author, Mrs. Jones, is one who has made a success in this line and knows what she is talking about. She writes in a concise, practical way, treating only of what she has learned in her own experience, which has been a long and varied one, and covering fully the whole subject. Any of our readers who keep cows, whether one or two hundred, will find this book. Send fifteen cents to the MASS. PLOUGHMAN CO., Boston, Mass.

## Household MAGAZINES FOR Housekeepers.

By arrangements with the publishers, we are able to furnish our readers with the various household publications given below at the following low rates in combination with the PLOUGHMAN.

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American Kitchen Magazine, 12 issues, \$5.00	\$5.00
Boston Cooking School Magazine, 12 issues, 2.00	2.00
Good Housekeeping, 12 issues, 2.00	2.00
Household, 12 issues, 1.00	1.00
Table Talk, 12 issues, 1.00	1.00
What to Eat, 12 issues, 1.00	1.00

Address Mass. Ploughman, Boston, Mass.

## THE BUSINESS HEN

Breeding and Feeding Poultry for Profit. A condensed practical encyclopedia of profitable poultry-keeping, with 250 practical questions, P. H. Jacobs, Henry Hale, James H. H. Dray, and others. Fully answers more than 500 questions about poultry farming. Carefully edited by H. W. C. Dray. A collection of the most valuable articles on poultry, with a full and complete question "What is an Egg?" It indicates the conditions for developing the egg, the incubation, care of chicks, treatment of diseases, and breeding, feeding and housing, are discussed in a clear and simple manner. Two successful egg-farms are described. Answered of 600 hens that average 150 eggs each per year, over 200 eggs each per year.

In short, this is the best book for who who sell little American hen" that has ever been printed.

Price in paper cover 40 cents. For Sale by Mass. Ploughman.

## Milk Route

FOR SALE OF 36 CANS 24 hours fresh milk 7 and 8 years old, new wagon, pump, ice-chest, cooler, keta, etc. Milk delivered for 6 and 7 years around, nearly all family trade. Less than 8 miles of Boston. Apply to

JAS. A. WILLEY,  
10 and 12 Federal St., Boston







## MARKETS.

## BOSTON LIVE STOCK MARKET.

Week ending Dec. 21, 1893.

Amount of Stock at Market.

Cattle, Sheep, Hogs, Veals.

This week, 2,075 9,151 34,205 1,079

Last week, 2,075 9,151 34,205 1,079

Values on Northern Cattle, etc.

Beef.—Per hundred pounds on total weight of

side, yellow and red, extra, \$10.00; first

quality, \$9.50; second quality, \$9.00; third

quality, \$8.50; fourth quality, \$8.00; fifth

quality, \$7.50; sixth quality, \$7.00; seventh

quality, \$6.50; eighth quality, \$6.00; ninth

quality, \$5.50; tenth quality, \$5.00; eleventh

quality, \$4.50; twelfth quality, \$4.00; thirteenth

quality, \$3.50; fourteenth quality, \$3.00; fifteenth

quality, \$2.50; sixteenth quality, \$2.00; seventeenth

quality, \$1.50; eighteenth quality, \$1.00; nineteenth

quality, \$0.50; twentieth quality, \$0.00.

Cows and Young Calves.—Fair quality, \$3.00

extra, \$4.00; fancy milk cows, \$5.00; first

quality, \$6.00; second quality, \$5.00; third

quality, \$4.00; fourth quality, \$3.00; fifth

quality, \$2.00; sixth quality, \$1.00; seventh

quality, \$0.50; eighth quality, \$0.00.

Store.—Thin young cattle for farmers; year-

lings, \$1.00; two-year-olds, \$1.50; three-year-

olds, \$2.00; four-year-olds, \$2.50; five-year-

olds, \$3.00; six-year-olds, \$3.50; seven-year-

olds, \$4.00; eight-year-olds, \$4.50; nine-year-

olds, \$5.00; ten-year-olds, \$5.50; eleven-year-

olds, \$6.00; twelve-year-olds, \$6.50; thirteen-year-

olds, \$7.00; fourteen-year-olds, \$7.50; fifteen-year-

olds, \$8.00; sixteen-year-olds, \$8.50; seventeen-year-

olds, \$9.00; eighteen-year-olds, \$9.50; nineteen-year-

olds, \$10.00; twenty-year-olds, \$10.50; twenty-one-

year-olds, \$11.00; twenty-two-year-olds, \$11.50;

twenty-three-year-olds, \$12.00; twenty-four-year-

olds, \$12.50; twenty-five-year-olds, \$13.00; twenty-

six-year-olds, \$13.50; twenty-seven-year-olds, \$14.00;

twenty-eight-year-olds, \$14.50; twenty-nine-year-

olds, \$15.00; thirty-year-olds, \$15.50; thirty-one-

year-olds, \$16.00; thirty-two-year-olds, \$16.50;

thirty-three-year-olds, \$17.00; thirty-four-year-

olds, \$17.50; thirty-five-year-olds, \$18.00; thirty-

six-year-olds, \$18.50; thirty-seven-year-olds, \$19.00;

thirty-eight-year-olds, \$19.50; thirty-nine-year-

olds, \$20.00; forty-year-olds, \$20.50; forty-one-

year-olds, \$21.00; forty-two-year-olds, \$21.50;

forty-three-year-olds, \$22.00; forty-four-year-

olds, \$22.50; forty-five-year-olds, \$23.00; forty-

six-year-olds, \$23.50; forty-seven-year-olds, \$24.00;

forty-eight-year-olds, \$24.50; forty-nine-year-

olds, \$25.00; fifty-year-olds, \$25.50; fifty-one-

year-olds, \$26.00; fifty-two-year-olds, \$26.50;

fifty-three-year-olds, \$27.00; fifty-four-year-

olds, \$27.50; fifty-five-year-olds, \$28.00; fifty-

six-year-olds, \$28.50; fifty-seven-year-olds, \$29.00;

fifty-eight-year-olds, \$29.50; fifty-nine-year-

olds, \$30.00; sixty-year-olds, \$30.50; sixty-one-

year-olds, \$31.00; sixty-two-year-olds, \$31.50;

sixty-three-year-olds, \$32.00; sixty-four-year-

olds, \$32.50; sixty-five-year-olds, \$33.00; sixty-

six-year-olds, \$33.50; sixty-seven-year-olds, \$34.00;

sixty-eight-year-olds, \$34.50; sixty-nine-year-

olds, \$35.00; seventy-year-olds, \$35.50; seventy-

one-year-olds, \$36.00; seventy-two-year-olds, \$36.50;

seventy-three-year-olds, \$37.00; seventy-four-year-

olds, \$37.50; seventy-five-year-olds, \$38.00; seventy-

six-year-olds, \$38.50; seventy-seven-year-olds, \$39.00;

seventy-eight-year-olds, \$39.50; seventy-nine-year-

olds, \$40.00; eighty-year-olds, \$40.50; eighty-one-

year-olds, \$41.00; eighty-two-year-olds, \$41.50;

eighty-three-year-olds, \$42.00; eighty-four-year-

olds, \$42.50; eighty-five-year-olds, \$43.00; eighty-

six-year-olds, \$43.50; eighty-seven-year-olds, \$44.00;

eighty-eight-year-olds, \$44.50; eighty-nine-year-

olds, \$45.00; ninety-year-olds, \$45.50; ninety-one-

year-olds, \$46.00; ninety-two-year-olds, \$46.50;

ninety-three-year-olds, \$47.00; ninety-four-year-

olds, \$47.50; ninety-five-year-olds, \$48.00; ninety-

six-year-olds, \$48.50; ninety-seven-year-olds, \$49.00;

ninety-eight-year-olds, \$49.50; ninety-nine-year-

olds, \$50.00; one hundred year-olds, \$50.50; one

hundred and one year-olds, \$51.00; one hundred

and two year-olds, \$51.50; one hundred and three

year-olds, \$52.00; one hundred and four year-olds,

\$52.50; one hundred and five year-olds, \$53.00;

one hundred and six year-olds, \$53.50; one hundred

and seven year-olds, \$54.00; one hundred and eight

year-olds, \$54.50; one hundred and nine year-olds,

\$55.00; one hundred and ten year-olds, \$55.50; one

hundred and eleven year-olds, \$56.00; one hundred

and twelve year-olds, \$56.50; one hundred and thirteen

year-olds, \$57.00; one hundred and fourteen year-olds,

\$57.50; one hundred and fifteen year-olds, \$58.00;

one hundred and sixteen year-olds, \$58.50; one hundred

and seventeen year-olds, \$59.00; one hundred and

eighteen year-olds, \$59.50; one hundred and nineteen

year-olds, \$60.00; one hundred and twenty year-olds,

\$60.50; one hundred and twenty-one year-olds, \$61.00;

one hundred and twenty-two year-olds, \$61.50; one

## BOSTON PRODUCE MARKET.

Wholesale Prices.

Poultry.

Fresh Killed.

Northern and Eastern.

Chickens, common to good, 12 to 13

Fowls, extra choice, 10 to 11

Fowls, common to good, 9 to 10

Turkeys, choice large young, 10 to 11

Turkeys, common to good, 9 to 10

Ducks, spring, 10 to 11

Pigeons, tame, 10 to 11

Western dry cattle, 10 to 11

Turkeys, common to good, 9 to 10

Chickens, common to good, 9 to 10

Fowls, common to good, 9 to 10

Turkeys, choice large young, 10 to 11

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## THE HORSE.

## UNCLE BEN AND HIS MORGAN NAME.

AS TOLD BY HIS PASTOR.

Wrote Ben, I met him early in my pastoral

career, Typical Vermont, standing straight, and his

feet out of boots.

I was thirty, he was eighty, but this single sign

appeared

Of Tim's waiting work—the whiteness of his

locks and flowing beard.

At the close of my first sermon, with a friendly

hand and smile.

By the altar rail he met me, led me down the

middle aisle.

Introduced me to the people, praised the pastor

gone before.

Told me how and where to find him as we parted

at the door.

"Go up to the village hotel, take the first

road to your right."

Keep on till you pass three houses, two are

brown and one is white;

When you reach the sign-board standing just

beyond the water-box,

Turn sharp to your left hand, leaving on your

right a ledge of rocks.

Go straight down the hill and follow, still your

left, a shady lane.

Leave a clearing on your right hand—there, I

guess I've made it plain.

Keep on through a sugar orchard, not the best of

roads, and then

Halt before you stand a farmhouse; I live

there, I'm Uncle Ben."

Going out I met my brother half way through the

shady lane.

Leading at his side a Morgan with his hard

charact in her mane.

"Handsome horse she's been," I ventured, after

greeting, to remark.

And his clear blue eye responded in a moment

with a spark.

Of electric fire, and smiling, he said, "Farther,

walk with me.

To the pasture just beyond us, then go home and

stop to tea."

I assented. Then he gripped—"Till the

creature's name is said;

Morgan horses come the nearest in intelligence

to man.

I must tell you something, parson, since you kind

of like the mare.

What occurred one fall as I was driving out to

our Sixt Fair.

Fan was trotting gently onward, I was taking in

the scene.

Nature never looked so lovely, never seemed so

sweet and clean;

Round the hills a purple splendor like an ocean

seemed to float.

And the maple leaves stood wearing Joseph's

many-colored coat.

Presently a team o'ertook us, and I heard the

driver cry

In a rude, sarcastic manner, "Now, old man, let

us go by!"

Looking round I saw two dusky, port young fel-

lows with a black.

High-stepping, stylish, showy creature, they

could hardly hold him back.

I was just about to give them all they wanted of

the way.

When, "Old fellow," said the other, "we can't

take your dust today."

"May be so," I said. He answered, "We don't

ride behind the heels

Of your old Green Mountain creepers; turn out,

or off come your wheels."

I turned back as the two dusky, and said

meekly, "In that case."

Looked to Fan, took up the reins, uttered one

short message, "Go."

As the tiger buds elated in the forest on his

prey.

As the flood rush through the meadows when

the mill dam breaks away,

So the Morgan, black her, straightened at one

bound and struck a pace

That had been of business in it, and we settled

down to race.

Road was full of teams and people, but they

heard the noise and drew

Up against the wayside fences, making room to

let us through.

How they cheered as we shot past them, women

cheered as well as men.

I could hear their voices shouting, "Let her out!"

"Go, Uncle Ben!"

And I went. Fan understood it, took the bit

right in her teeth.

While the trees and fences round us, and the firm

ground underneath

View behind us. Dogs were barking, geese ran

cackling, cows lowed.

High above the barnyard fences, dust in clouds

behind us, too.

That was traveling—parson—traveling; every

buggie, gig and strap

Second alive. Fan's neck extended and her tail

laid in my lap.

Over hillsides, down through hollows, crossing

bridges with a bound,

And the woods went like lightning that they

hardly touched the ground.

Well, I'm most ashamed to tell it, but Fan went

at such a rate

That I thought I best to head her for the race

course through the gate.

And I caught her down and cool her, get her

sobered well in hand;

But the horses were just starting as we reached

the judges' stand.

And the folks that tend the races had the biggest

kind of show.

For the instant that the starter shouted out the

message "Go!"

Fan was in it; couldn't stop her; and the jock-

eys in their glee.

With their whips adorned with ribbon, in their

regal racing rig,

Whipped and shouted; but, no matter, I was

leading with Fan.

That had never struck a hoof on a race course as

a fair.

Don't believe in racer—parson—never did, but

this was one

Of the purest of surprises, and the people had

the fun.

There I was, in a flash—burly, old straw hat,

without a whip.

Leading round the whole procession at a clean

two-hundred clip.

How the people cheered and shouted, "Go it,

haysned! You will win!"

And I went in; couldn't help it; Fan was going

then like the wind.

With that old Green Mountain Morgan, little

cyclops sort of pace,

It's superlative staidness and it's fascinating

grace.

But the jockeys entered protest for they saw that

they were beat;

I was not a regular entry, and could run on other

beats.

I was glad of the contest, and proceeded to

explain.

But the crowd broke into cheering and the band

struck up a strain.

So we left the course with honor, Fan and I, but,

parson, just

Beyond the gate were those dandies with a horse

all foam and dust

Just beside us, so I raised my hat and said, in

my own way.

"How is business, boys, progressing, taking

wheels off this fine day?"

But they didn't seem to hear me; their attention

had been led

To some interesting object; they were looking

straight ahead.

When they pass Green Mountain Morgans, with

our sort of hills to climb.

They must get up pretty early and be busy all

the time.

Here's the pasture, parson; kindly drop the bars

down, two or three;

Thanks, "Go, Fan." Just see her, parson. Now,

come home and stay to tea."

—Dumb Animals.

Statistics Concerning 230 Per-

formers.

Thirty-four years ago there were but 68 horses

that had made a trotting record of 2.30 or better

to horses, and that year, 1864, only seven trot-

ters made the 2.30 list. One of the number

the writer had the pleasure of owning and driv-

ing into the Champlain circle, Lady Franklin

(2.50%), grandam of Jay Bird, sire of Allerton

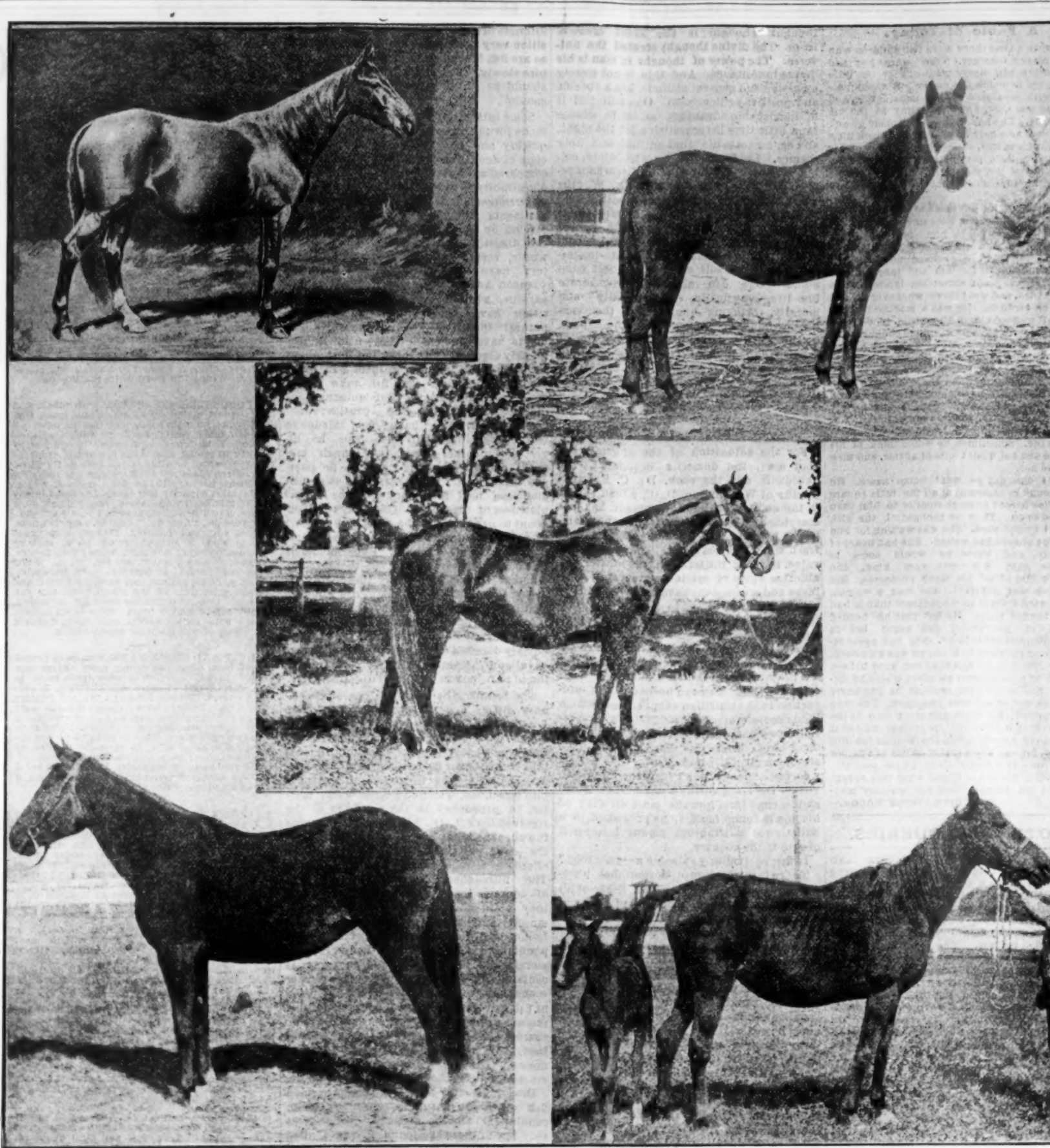
(2.50%), and 60 trotters and seven pacers in the

list.

"Thirty-four years" is a ponderable space of

time; nearly half of a long human life—a space

of time available of containing great events in



## GREAT BROOD MARES.

ATLANTA.

BEULAH.

NANCY LEE.

LADY BUNKER.

ESTABELLA.

The lives of many a man, and for having given

birth to a great mount of good intentions never

"carried out," bright hopes "never fulfilled,"

and thoughts and deeds, the memories of which

are but endless and unavailing regrets.

Year by year the 230 trotters and pacers

have increased in number, until the 230 horses

are as thick as leaves in Florida. Nearly 25,000

horses have entered the 2.30 list during the past

35 years. The rapid strides made by the light-

harness horse within the past few years is

almost incomprehensible.

An indication of the rapid progress made by

the harness horse, it is only necessary to recall

the fact that a few years ago we considered a

horse that could crack his heels in a race in 2.30

was eligible to campaign with. No way, a

horse that has not the ability to trot a mile in

2.30 or pace a mile in 2.15 or thereabouts is

hardly worth bothering with.

It seems almost superfluous to keep track of

the records slower than 2.35 trotting and 2.20

pacing, and not much value is attached to make

slower than those. It strikes me that the 2.30

trotting and 2.20 pacing records, which are now

considered standard, will soon be reduced to

2.25 trotting and 2.20 pacing.

To keep the records slower than those seems

to do it and confuse the collection of records,

and is a waste of time and labor.

The table of new record makers of 2.30 and the

old ones that have reduced their records the

past season, 1898, is remarkable. When we

peruse the list from 2.30 down to 2.00%, trot-

ting and 2.00% pacing, which are now the new

records for the past year, it makes our old teeth chatter

and our hair stand upright.

The table of 2.30 trotters and pacers for 1898

shows that the whole number of new record

makers and the old ones that have reduced their

records the past season is 2871. The breeding

of 121 of the number is not given.

Three hundred and sixteen trotters and pacers

that had a record of 2.30 or better at the first of

the year, 1898, have reduced their records.

The following is the list in numbers:

Class Trotters Pacers Total

2.04... 0 Directly, 2.04% 1 1

2.05... 0 0 0

2.06... 0 0 0

2.07... 0 0 0

2.08... 0 0 0

2.09... 0 0 0

2.10... 0 0 0

2.11... 0 0 0

2.12... 0 0 0

2.13... 0 0 0

2.14... 0 0 0

2.15... 0 0 0

2.16... 0 0 0

2.17... 0 0 0

2.18... 0 0 0

2.19... 0 0 0

2.20... 0 0 0

Total... 389 446 835

The list is composed of: Stallions... 148

Mares... 260

Geldings... 127

Total... 535

Eight stallions have trotted in 2.10 or better

the past season, and it is interesting to pursue

their breeding. They are as follows:

Binnen (2.00%), by May King, by Sir

Hines, by Hambletonian 10. Hines's dam

Young Miss, by Young King, by George Wilkes

by Hambletonian 10.

Oald (2.07%), by Hiwood, by Nutwood, by

Belmont, by Abdullah 15, by Hambletonian.

Oald's dam, Ninia, consack, by Dan Consack, by

August Belmont, by Hambletonian 10.

Directum Kelly (2.08%), by Direct, by Di-

rector, by Dictator, by Hambletonian 10.

Directum Kelly's dam, Rose Ludwig, by Antec, by

Kleaton, by Hambletonian 10.

Akey (2.08%), by McFarland, by Charles

Caffrey, by General Knox, by Vermont Hero, by

Vermont Black Hawk. Akey's dam, Strange

Girl, by Strangemore, by Columbia Chief, by

Mambrino Black Hawk, by Stockbridge Chief, by

Vermont Black Hawk.

Tommy Britton (2.09%), by Liberty Bell, by

Holl Boy, by Klectioner, by Hambletonian 10.

Tommy Britton's dam, Keapake, by Panoos,

by Woodford Mambrino, by Mambrino Chief,

Panoos's dam was by Harold, by Hamble-

tonian 10.

Pilatus (2.09%), by Onward, by George Wilkes,

by Hambletonian 10. Pilatus's dam, Phyllis, by

Esber, by Hambletonian 10.

Monterey (2.09%), by Sidney, by Santa Clara,

by Strathmore, by Hambletonian 10.

Hattie, by Commodore Belmont, by Belmont,

by Abdullah 15.

Creecus (2.09%), by Robert McGregor, by

Major Edm., by Abdullah 15, by Hambletonian

10. Creecus's dam, Mabel, by Mambrino How-

ard, by Mambrino Chief.

It will be seen that five of the above stallions

are bred to the Hambletonian 10.

Tommy Britton's sire was a great grandson of

Hambletonian, and the sire of his dam, Panoos,

was out of